Complete Summary

GUIDELINE TITLE

Ingrown toenails.

BIBLIOGRAPHIC SOURCE(S)

Academy of Ambulatory Foot and Ankle Surgery. Ingrown toenails. Philadelphia (PA): Academy of Ambulatory Foot and Ankle Surgery; 2003. 7 p. [30 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Ingrown toenails

GUIDELINE CATEGORY

Diagnosis
Treatment

CLINICAL SPECIALTY

Podiatry

INTENDED USERS

Podiatrists

GUIDELINE OBJECTIVE(S)

To provide recommendations for the diagnosis and treatment of ingrown toenails

TARGET POPULATION

Patients with ingrown toenails

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. History, including chief complaint (degree, nature, location, duration, onset, course of the pain, previous treatment) and past medical history
2. Physical examination, including peripheral vascular exam, neurological and orthopedic exam; palpation; dermatological exam; nail plate type; muscle testing
3. Diagnostic procedures, including gram stain or culture and sensitivity; x-rays; vascular studies

Treatment

1. Nonpermanent treatment, such as simple nail avulsion; incision and drainage; simple nail avulsion with debridement of the adjacent soft tissue
2. Surgical procedures, such as treatment with chemicals (e.g., phenol, sodium hydroxide); surgical removal of the matrix; laser and/or radio-wave matricectomy; bone surgery; avulsion of the offending portion of the nail and debridement of the nail if it is thick; repair of the hypertrophic ungualabia
3. Home care, such as home soaks, topical antibiotics, oral antibiotics, proper shoegear, proper trimming technique

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline development process began with a thorough MEDLINE search as well as a "call for papers" from the membership of the Academy of Ambulatory Foot and Ankle Surgery at large.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Drafts of the guidelines were reviewed in detail by each member of the Board of Trustees.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

I. Diagnosis
   - A. History: This should include evaluation of the chief complaint (including the degree, nature, location, duration, onset, and course of the pain). Previous treatment and past medical history should be considered as well, especially if there is prior or family history of ingrown toenails, history of trauma, or previous history of infection.
   - B. Physical examination may include:
     1. Peripheral vascular exam
     2. Neurological exam

3. Orthopedic exam
4. Palpate (without hurting the patient)
5. Dermatological (i.e., infection/inflammation present)
6. Nail plate type
7. Muscle testing

C. Diagnostic procedure
1. Gram stain or culture and sensitivity may be performed in the presence of suspected infection.
2. X-rays may be indicated if the patient has:
a. Pain on downward or lateral pressure of the nail
b. Clinical evidence of and/or history of chronic infections
c. History of trauma to the toe
d. Patient has a pincer-shaped toenail
e. Clinical evidence of subungual exostosis
3. Vascular studies may be indicated if:
a. Patient has signs or symptoms of diminished circulation (i.e., lack of hair growth, shiny skin, rubor, absent or diminished pedal pulses)
b. Patient is a diabetic

II. Types of Treatment
A. Nonpermanent treatment--Initial treatment may consist of:
1. A simple nail avulsion with or without antibiotic treatment
2. Incision and drainage of the soft tissue adjacent to the nail
3. Simple nail avulsion with debridement of the adjacent soft tissue

B. Surgical procedure for ingrown toenails (These may be utilized alone or in combination).
1. Treatment with chemicals such as phenol or sodium hydroxide
2. Surgical removal of the matrix
3. Laser and/or radio-wave matricectomy
4. Bone surgery is indicated with the treatment of ingrown toenails when there is pain with downward pressure, when there is subungual exostosis present, or when there is osteomyelitis
5. Treatment of the mild to moderate noninfected nail consists of avulsion of the offending portion of the nail and debridement of the nail if it is thick
6. Repair of hypertrophic ungualabia

C. With the above, patients may be instructed on:
1. Home soaks
2. Topical antibiotics
3. Oral antibiotics
4. Proper shoegear
5. Proper trimming technique

III. Site of Surgery

The surgical treatment of ingrown toenail syndrome is usually performed in the doctor's office. It may be performed in an ambulatory center or in a hospital if the patient has underlying problems or if the procedure is going to be performed in conjunction with other surgical procedures.

IV. Anesthetic

Local anesthesia is sufficient unless there are extenuating circumstances.

V. Hemostasis

Hemostasis is desired when performing a matricectomy. This may be a tourniquet around the toe and/or anesthetic with epinephrine.

VI. Surgical Preparation

Usually aseptic scrub, prep, and draping are indicated.

VII. Preoperative Lab

Usually not necessary, but may be indicated if the doctor suspects a systemic illness. This is based on the patient's medical history and his evaluation of the current medical status of the patient.

VIII. Prophylactic Antibiotics

At the discretion of the surgeon, unless the patient's medical history indicates a history of SBE, mitral valve prolapse, rheumatic fever, etc., at which time they should be given.

IX. Pathological Analysis

Pathological analysis of surgically removed tissue is recommended if suspected malignant condition exists. Mycology studies may be performed if onychomycosis is suspected.

X. Bilateral or Multiple Surgery

May be performed at the same surgical session or in different surgical sessions as musculoskeletal surgery and/or other nail surgery. It is acceptable to operate on both feet at the same time when it is mutually agreeable to the patient and the doctor.

XI. Infected Ingrown Toenail

With this condition a nail avulsion is indicated. Anesthesia may or may not be used. In severe cases, when the patient elects to have a matricectomy in conjunction with nail avulsion, anesthesia is necessary.

XII. Matricectomy in the Presence of Infection or Inflammation

Although there are no clear cut guidelines that exist concerning the performance of a matricectomy when there is concomitant inflammation or infection, there is wide spread performance of matricectomies when inflammation/infection are present and therefore this has become an acceptable practice in podiatry.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Treatment may relieve pain, eliminate infection, and reduce or permanently correct the deformity.

POTENTIAL HARMS

Postoperative Complications

- Toenail may grow back
- Infection
- May have to have another surgery
- Prolonged drainage
- Clot
- Nail may get deformed
- Chemical reaction
- Inclusion cyst
- Gangrene
- Loss of toe
- Loss of limb
- Phlebitis

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Academy of Ambulatory Foot and Ankle Surgery. Ingrown toenails. Philadelphia (PA): Academy of Ambulatory Foot and Ankle Surgery; 2003. 7 p. [30 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 (revised 2003 Sep)

GUIDELINE DEVELOPER(S)

Academy of Ambulatory Foot and Ankle Surgery - Medical Specialty Society

SOURCE(S) OF FUNDING

Academy of Ambulatory Foot and Ankle Surgery (AAFAS)

GUIDELINE COMMITTEE

Preferred Practice Guidelines Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

The committee consisted of five (5) members who were board certified, had a minimum of ten (10) years of clinical practice experience, and a minimum of five (5) years of teaching experience.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Academy of Ambulatory Foot and Ankle Surgery. Ingrown toenails. Philadelphia (PA): Academy of Ambulatory Foot and Ankle Surgery; 2000. 20 p.

The guideline is reviewed and updated twice a year as needed (in May and October).

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the Academy of Ambulatory Foot and Ankle Surgery (AAFAS) (formerly the Academy of Ambulatory Foot Surgery), 1601 Walnut Street, Suite 1005, Philadelphia, PA 19102; Web site, www.academy-afs.org.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on October 12, 2000. The information was verified by the guideline developer as of December 8, 2000. This summary was updated by ECRI on December 19, 2003. The information was verified by the guideline developer on December 29, 2003.

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